VIDEO MONITORING AND ANALYSIS SYSTEM FOR VIVARIUM CAGE RACKS

SUMMARY

This invention pertains to a system for continuous observation of rodents in home-cage environments with the specific aim to facilitate the quantification of activity levels and behavioral patterns for mice housed in a commercial ventilated cage rack. The National Cancer Institute's Radiation Biology Branch seeks partners interested in collaborative research to co-develop a video monitoring system for laboratory animals.

REFERENCE NUMBER

E-090-2013

PRODUCT TYPE

- Software

KEYWORDS

- behavior analysis
- vivarium monitoring
- home-cage
- video

COLLABORATION OPPORTUNITY

This invention is available for licensing and co-development.

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DESCRIPTION OF TECHNOLOGY

This invention pertains to a system for continuous observation of rodents in home-cage environments with the specific aim to facilitate the quantification of activity levels and behavioral patterns for mice housed in a commercial ventilated cage rack. The home-cage in-rack provides daytime and nighttime monitoring with the stability and consistency of a home cage environment. The system is made up of a dual-video camera hardware design mounted on a video rack and an executable software means for automatic detection and processing for tracking multiple animals. The National Cancer Institute's Radiation Biology Branch seeks partners interested in licensing or collaborative research to co-develop a video monitoring system for laboratory animals.

POTENTIAL COMMERCIAL APPLICATIONS

- Laboratory animals health monitoring
- Laboratory rodents activity profiling
- Laboratory rodents behavior analysis
- Video-monitoring for rodent therapeutic and drug effect studies
- Behavior and activity analysis for animal model characterization
- Rodent circadian/sleep cycle studies
- Vivarium rodents birth/death monitoring.

COMPETITIVE ADVANTAGES

- Real-time monitoring
- Continuous day/night monitoring
- Multiple circadian cycle activity and behavior data
- Home-cage environment video
- Scalable system – easy installation of large number of units per rack
- Low real-estate consumption
- High throughput
- Low-cost
- Ability to monitoring multiple mice.

INVENTOR(S)

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DEVELOPMENT STAGE

- Prototype

PATENT STATUS

- **U.S. Filed:** PCT/US2014/044923 (30 June 2014)

THERAPEUTIC AREA

- Cancer/Neoplasm